

What is claimed is:

1.A scanning apparatus capable of engaging an automatic document feeder, wherein a first scanning zone is provided for platform type scanning and a second scanning zone is provided for automatic feeder type, comprising:

at least one light source, which can provide the light emitting to a manuscript to proceed the scanning motion;

a first supporting seat, having a first reflection mirror that can receive the light reflected from the manuscript and further redirect its light path;

a second supporting seat, which keeps a proper distance from the first supporting seat, comprising:

at least one switch-able reflection mirror capable of switching between a first position and a second position;

a plurality of reflection mirrors being provided at proper positions on the second supporting seat.

an image retrieving unit, corresponding to the second supporting seat, can receive the reflected, direction changed and transmitted light and convert it into an electronic signal, and

an image retrieving unit adjustment apparatus, which connects with the image retrieving unit and can provide the image retrieving unit with an appropriate displacement movement.

wherein, when the switch-able reflection mirror is at the first position, the inter-positions and angles' corresponding relationship of the first reflection mirror of the first supporting seat and a plurality of reflection mirrors of the second supporting seat can justly make the light of the light source be through reflecting and changing direction then emit to the image retrieving unit to proceed scanning by platform type; while the switch-able reflection mirror is at the second position, the inter-positions and angle's corresponding relationship of a plurality of reflection mirrors of the second supporting seat can justly make the light of the light source be through reflecting and changing direction then emit to the image retrieving unit to proceed scanning by document feeding type by an automatic document

feeder.

2.The scanning apparatus capable of engaging an automatic document feeder of claim 1, wherein when scan is proceeded by platform type, the first supporting seat and the second supporting seat with 2:1 speed ration linearly move within the first scanning zone.

3.The scanning apparatus capable of engaging an automatic document feeder of claim 1, wherein when scan is proceeded by document feeding type by an automatic document feeder, the first supporting seat and the second supporting seat position still within the second scanning zone.

4.The scanning apparatus capable of engaging an automatic document feeder of claim 1, wherein the light source is provided at proper position between the supporting seat and the second supporting seat.

5.The scanning apparatus capable of engaging an automatic document feeder of claim 1, wherein the first supporting seat has a first reflection mirror (M1), the second supporting seat has a second reflection mirror (M2) that is a switch-able reflection mirror and a third reflection mirror (M3), the light source provides light emitting to the proceeding path of the manuscript located in the first scanning zone, the light source→the manuscript of the first scanning zone→M1→first position of M2→M3→image retrieving unit; while the light source provide light emitting to the proceeding path of the manuscript located in the second scanning zone, the light source→the manuscript of the second scanning zone→second position of M2→M3→image retrieving unit.

6.The scanning apparatus capable of engaging an automatic document feeder of claim 1, wherein the first supporting seat has a first reflection mirror (M1), the second supporting seat has a second reflection mirror (M2), a third reflection mirror (M3) that is a switch-able reflection mirror and a fourth reflection mirror (M4), the light source provides light emitting to the proceeding path of the manuscript located in the first scanning zone, the first light source→the manuscript of the first scanning zone→M1→M2

→first position of M3→image retrieving unit; while the second light source provide light emitting to the proceeding path of the manuscript located in the second scanning zone, the light source→the manuscript of the second scanning zone→M4→second position of M3→image retrieving unit.

7.The scanning apparatus capable of engaging an automatic document feeder of claim 1, wherein the switch-able reflection mirror is a rotate-able reflection mirror capable of switching to the first position and the second position by rotation method.

8.The scanning apparatus capable of engaging an automatic document feeder of claim 1, wherein the switch-able reflection mirror is a reflection mirror with semi-penetration; when light passes on the front surface, the reflection mirror with semi-penetration reflects the light; when light passes on the back surface, the reflection mirror with semi-penetration lets the light pass through.

9.The scanning apparatus capable of engaging an automatic document feeder of claim 1, wherein the image retrieving unit further comprising:

a lens, which can receive the reflected, direction changed, and transmitted light and focus it at the focus; and

a charge coupled device, provided at the focus of the lens, can receive the light focused by the lens and convert it into digital signal that can be processed by computer.

10.The scanning apparatus capable of engaging an automatic document feeder of claim 1, wherein the image retrieving unit adjustment apparatus makes a horizontal displacement movement to adjust the variation of the total light-path length.

11.The scanning apparatus capable of engaging an automatic document feeder of claim 1, wherein the image retrieving unit adjustment apparatus makes an automatic in-focus adjustment to adjust the variation of the total light-path length.

12. A scanning apparatus capable of engaging an automatic document feeder, wherein a first scanning zone is provided for platform type scanning and a second scanning zone is provided for automatic feeder type, comprising:

at least one light source, which can provide the light emitting to a manuscript to proceed the scanning motion;

a first supporting seat, having a first reflection mirror that can receive the light reflected from the manuscript then reflect it and further redirect its light path.

a second supporting seat, which keeps a proper distance from the first supporting seat, at appropriate positions of the second supporting seat there are a plurality of reflection mirrors are provided.

an image retrieving unit, corresponding to the second supporting seat, can receive the reflected, direction changed and emitting light and convert it into an electronic signal, and,

an image retrieving unit adjustment apparatus, which connects with the image retrieving unit and can provide the image retrieving unit with a proper vertical displacement movement.

wherein, when the image retrieving unit adjustment apparatus is at the normal position, the inter-positions and angles' corresponding relationship of the a plurality of reflection mirrors can justly make the light of the light source be through reflecting and changing direction then emit to the image retrieving unit to proceed scanning by platform type; while the image retrieving unit adjustment apparatus moves vertically to a higher position, the inter-positions and angle's corresponding relationship of a plurality of reflection mirrors can justly make the light of the light source be through reflecting and changing direction then emit to the image retrieving unit to proceed scanning by document feeding type by an automatic document feeder.

13.The scanning apparatus capable of engaging an automatic document feeder of claim 12, wherein when scan is proceeded by platform type, the first supporting seat and the second supporting seat with 2:1 speed ration linearly move within the first scanning zone.

14.The scanning apparatus capable of engaging an automatic document feeder of claim 12, wherein when scan is proceeded by document feeding type by an automatic document feeder, the first supporting seat and the second supporting seat position still.

15.The scanning apparatus capable of engaging an automatic document feeder of claim 12, wherein the light source is provided at proper position between the supporting seat and the second supporting seat.

16.The scanning apparatus capable of engaging an automatic document feeder of claim 12, wherein the first supporting seat has a first reflection mirror (M1), the second supporting seat has a second reflection mirror (M2) and a third reflection mirror (M3), the light source provides light emitting to the proceeding path of the manuscript located in the first scanning zone, the light source→the manuscript of the first scanning zone→M1→M2→M3→image retrieving unit (image retrieving unit adjustment apparatus is at normal position); while the light source provide light emitting to the proceeding path of the manuscript located in the second scanning zone, the light source→the manuscript of the second scanning zone→M1→M2→M3→image retrieving unit (image retrieving unit adjustment apparatus is at higher position).

17.The scanning apparatus capable of engaging an automatic document feeder of claim 12, wherein the image retrieving unit further comprising:

a lens, which can receive the reflected, direction changed, and transmitted light and focus it at the focus; and

a charge coupled device, provided at the focus of the lens, can receive the light focused by the lens and convert it into digital signal that can be processed by computer.

18.The scanning apparatus capable of engaging an automatic document feeder of claim 12, wherein the image retrieving unit

adjustment apparatus makes an automatic in-focus adjustment to adjust the variation of the total light-path length.

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